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COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION
2.60 174.91

=> file req

COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST

2.60 174:91

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STRUCTURE FILE UPDATES: 24 SEP 2007 HIGHEST RN 947820-54-4 DICTIONARY FILE UPDATES: 24 SEP 2007 HIGHEST RN 947820-54-4

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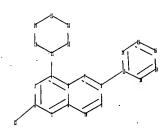
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

Uploading C:\Program Files\Stnexp\Queries\10595126IIa.str



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chain nodes :
12
ring nodes :
chain bonds :
2-12 4-11 8-13
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 11-19 11-23 13-14 13-18
14-15 15-16 16-17 17-18 19-20 20-21 21-22 22-23
exact/norm bonds :
2-12 4-11 8-13 11-19 11-23 19-20 20-21 21-22 22-23
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 13-14 13-18 14-15 15-16
16-17 17-18
isolated ring systems :
containing 1 : 11 : 13 :
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G1:CH2,O,S

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom

L5 STRUCTURE UPLOADED

=> d 15 L5 HAS NO ANSWERS L5 STI

Young, Shawquia, Page 2

Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 09:21:02 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED -11 TO ITERATE

100.0% PROCESSED

11 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

COMPLETE BATCH

PROJECTED ITERATIONS:

22 TO 418

PROJECTED ANSWERS:

3 TO 163

L6

3 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 09:21:06 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 235 TO ITERATE

100.0% PROCESSED

SEARCH TIME: 00.00.01

58 SEA SSS FUL L5

58 ANSWERS

=> file hcaplus COST IN U.S. DOLLARS

SINCE FILE TOTAL

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347.01 172.10 FULL ESTIMATED COST

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235 ITERATIONS

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Young, Shawquia, Page 3

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17 L8 14 L7

=> d ed abs ibib hitstr tot

ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 29 Jun 2005

II

The title compds. I [wherein R = H, (un)substituted alkyl, alkoxy, etc., R1 = H, Ph, alkyl, etc., R2 and R3 = independently alkyl, PhCH2, etc.] or pharmaceutically acceptable salts thereof are prepared as No synthetase inhibitors for the prevention and treatment of diseases caused by NO

rise. For example, the compound II was prepared II inhibited NO generation with ID50 of 14.85 µM.
ACCESSION NUMBER: 2005:561514 HCAPLUS

DOCUMENT NUMBER:

INVENTOR (S): PATENT ASSIGNEE (S): SOURCE:

2005:561514 RCAPLUS
143:211928
Preparation of Pteridine derivatives as nitric oxide
synthase inhibitors
Yao, Qizheng
China Pharmaceutical University, Peop. Rep. China
Paming Zhuanli Shenqing Gongkai Shuomingshu, No pp.
given
CODEN: CNXXEV
Patent
Chinese
1

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

DATE PATENT NO. KIND DATE APPLICATION NO. CN 2003-10106588 CN 2003-10106588 CN 1546491 PRIORITY APPLN. INPO.: 20041117 20031210 20031210

OTHER SOURCE(S):

R SOURCE(S):
CASREACT 143:211928, MARPAT 143:211928
247913-60-6P 247913-61-7P 862503-58-0P
RL: PAC (Pharmacological activity), SPN (Synthetic preparation), THU
(Therapeutic use), BIOL (Biological study), PREP (Preparation), USES

(drug candidate; preparation of pteridine derivs. as nitric oxide synthase

name inhibitors) 247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 25 Mar 2005

Pteridine derivs. of formula I [X = 0, SOm; m = 0-2; R1 = alkyl, cycloalkyl, aryl, arylalkyl, heterocyclyl, etc., R2 = amino, acylamino.carbamoyl, ureido, etc., R3, R4 = H, halo, alkyl, carboxyalkyl,

etc., R3R4 = alkylene, etc.) are prepared for the manufacture of a medicament for

medicament for
the prevention or treatment of septic shock and TNP-α related disorders. Thus, II was prepared, and had ICSO of 0.4 μM against TNP-α.
ACCESSION NUMBER: 2005:259882 HCAPLUS
DOCUMENT NUMBER: 142:336393
TITLE: Preparation of pteridine derivariums for the prevention of the pr

treatment

INVENTOR (S) : Maurits

of septic shock and TNP- α -related diseases. Waer, Mark Jozef Albert, Herdewijn, Piet Andre

Maria; De Jonghe, Steven Cesar Alfons; Marchand, Arnaud Didier Marie; Yuan, Lin; El Hassane, Sefrioui 4 Aza Bioscience Nv, Belg. PCT Int. Appl., 79 pp. CODEN: PIXXD2 PATENT ASSIGNEE(S):

DOCUMENT TYPE: Patent English FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

> DATE PATENT NO. KIND DATE APPLICATION NO. 20040913 WO 2005025574 WO 2005025574 A2 A3 20050324 WO 2004-EP10198 20050630 BZ, CA, CH, FI, GB, GD, KR, KZ, LC, MZ, NA, NI SK, SL, SY ZA. ZM, ZW, ZM, ZW, AM, CZ, DE, DK, PT, RO, SE ML, MR, NE 025574
> AB, AG,
> CN, CO,
> GE, GH,
> LK, LR,
> NO, NZ,
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> BB, ES, A3 20050630
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> HR, HU, ID, IL,
> LT, LU, LY, MA,
> PG, PH, PL, PT,
> TR, TT, TZ, UA,
> KE, LS, MW, MZ,
> KZ, MD, RU, TJ,
> FR, GB, GR, HU,
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> VC, VN,
> SZ, TZ,
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> MC, NL,
> GN, GQ, BY, ES, KP, MX, SG, YU, UG, CY, PL, GW, GB 2405793 20050316

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ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

862503-58-0 HCAPLUS
2-Pteridinamine, 6-(4-methylphenyl)-4-(1-piperidinyl)- (CA INDEX NAME)

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ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN
GB 2413324 A 20051026 GB 2004-8955
A1 2004271721 A1 20050324 AU 2004-271721
CA 2534549 A1 20050324 CA 2004-2534549
EP 1663244 A2 20060607 EP 2004-765120
                                                                                                                                        (Continued)
20040422
20040913
20040913
20040913
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           EP 1663244
                   1663244 B1 20070815
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU,
IB, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
2007004721 A1 20070104 US 2006-595161
APPLN. INPO:: GB 2003-21384
                                                                                                                                         NL. SE. MC. PT.
                                                                                                                                                        20060310
20030912
           US 2007004721
PRIORITY APPLN. INFO.:
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                                                                                                                                                 A 20040422
                                                                                                    WO 2004-EP10198
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OTHER SOURCE(S):

CASREACT 142:336393, MARPAT 142:336393

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-70-0P
278800-08-1P 278800-09-2P 278800-18-3P
847756-41-6P 847756-45-0P 847756-43-8P
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Uses) (preparation of ptsridine derivs, for treatment of septic shock and TNF-a-related diseases) 47913-58-2 HCAPLUS - Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 247913-60-6 NCAPLUS CN 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 247913-61-7 HCAPLUS CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 278800-06-9 HCAPLUS CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 278800-18-3 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

RN 847756-41-6 HCAPLUS
CN Benzamide, N-{4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl}- (CA
INDEX NAME)

RN 847756-42-7 HCAPLUS CN Acetamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]-2-phenoxy-(CA INDEX NAME) L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Conti

RN 278800-07-0 HCAPLUS CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

RN 278800-08-1 HCAPLUS CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9Cl) (CA INDEX NAME) .

RN 278800-09-2 HCAPLUS CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-43-8 HCAPLUS CN Propanamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

RN 847756-44-9 HCAPLUS
CN 2-Purancarboxamide, N-{4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl](CA INDEX NAME)

RN 847756-45-0 HCAPLUS CN Cyclohexamecarboxamide, N-[4-[2-amino-4-(4-morpholiny1)-6pteridinyl]phenyll- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-46-1 HCAPLUS
Benzamide, N-[4-[2-amino-4-[4-morpholinyl]-6-pteridinyl]phenyl]-4-chloro-(CA INDEX NAME)

847756-47-2 HCAPLUS Acresanide, N-[4-(2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-(phenylmethoxy)- (CA INDEX NAME)

847756-48-3 HCAPLUS
4-Pyridinecarboxamide, N-[4-[2-amino-4-(4-morpholiny])-6-pteridiny])phenyl]- (CA INDEX NAME)

847756-50-7 HCAPLUS Mcthanesulfonamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

947756-54-1 HCAPLUS Benzenesulfonamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl)-(CA INDEX NAME)

RN 847756-55-2 HCAPLUS CN Acetamide,
N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-phenoxy(CA INDEX NAME)

847756-56-3 HCAPLUS
4-Pyridinecarboxamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

RN 847756-51-8 HCAPLUS
CN Butanoic acid,
4-[(4-12-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

847756-52-9 HCAPLUS Benzoic acid, 4-1([4-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl)amino|carbonyl1-, methyl ester (CA INDEX NAME)

847756-53-0 HCAPLUS

e-/:ps--3-0 HCAPLUS Benzamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl}- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-57-4 HCAPLUS Cyclohexanecarboxamide, N-{3-{2-amino-4-(4-morpholiny1)-6-pteridiny1|pheny1|- (CA INDEX NAME)

847756-58-5 HCAPLUS
Benzoic acid, 4-{[[3-{2-amino-4-{4-morpholinyl}-6-pteridinyl]phenyl|amino|carbonyl|-, methyl ester (CA INDEX NAME)

RN 847756-59-6 HCAPLUS

Subancic acid,
4-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

NH-C-CH₂-CH₂-C-OBL

RN 847756-60-9 HCAPLUS CN Propanoic acid, 3-[3-[2-amino-4-(4-morpholinyl)-6pteridinyl]phenyl]amino]-3-oxo-, ethyl ester (CA INDEX NAME)

NH-C-CH₂-C-OEt

RN 847756-61-0 HCAPLUS
CN Acetamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]-2(phenylmethoxy)- (CA INDEX NAME)

NH-C-CH₂-O-CH₂-Ph

RN 847756-62-1 HCAPLUS
CN 'Ethanesulfonamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1)(CA INDEX NAME)

L8 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS On STN (Continued)

RN 847756-65-4 HCAPLUS:
CATDamic acid, [(18)-2-[(3-[(2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

2N N T - Buo N H

RN 847756-66-5 HCAPLUS
CN Carbamic acid, [1]R1-2-[[3-[2-amino-4-[4-morpholiny]]-6pteridinyl]phenyl]amino]-1-[1]H-indol-3-ylmethyl]-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI)- (CA INDEX NAME)

Absolute stereochemistry.

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LB ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

NH-S-Et

RN 847756-63-2 HCAPLUS
CN Carbamic acid, {(18)-2-[{3-{2-amino-4-{4-morpholiny1}-6-pteridinyl]phenyl]amino|-2-oxo-1-{phenylmethyl}ethyl}-, 1,1-dimethylethyl ester (9CI), {CA INDEX NAME}

Absolute stereochemistry.

RN 847756-64-3 HCAPLUS
CN Carbamic acid, {(IR)-2-{[3-{2-amino-4-{4-morpholinyl}}-6-`
pteridinyl]phenyl]amino]-2-oxo-1-{phenylmethyl}ethyl}-, 1,1-dimethylethyl
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

LB ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 847756-68-7 HCAPLUS
CN 2-Pteridinamine, 6-(4-ethoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

O O Et

RN 847756-69-8 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(phenylmethoxy)phenyl]- (CA INDEX
NAME)

0- CH₂- Ph

RN 847756-70-1 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(2-phenylethoxy)phenyl]- (CA INDEX NAME)

O-CH₂-CH₂-Ph

RN 847756-71-2 HCAPLUS

Sutanenitrile, 4-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenoxy]-

INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-72-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(4-propoxyphenyl)- (CA INDEX NAME)

847756-73-4 HCAPLUS
Butanoic acid, 4-[4-{2-amino-4-{4-morpholinyl}-6-pteridinyl}phenoxy}-,
ethyl ester (CA INDEX NAME)

B47756-74-5 HCAPLUS
Acetic acid, (4-|2-amino-4-(4-morpholinyl)-6-pteridinyl)phenoxy]-, ethylester (9CI) (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

848415-15-6 HCAPLUS Naphthalenecarboxamide, N-[4-(2-amino-4-(4-morpholinyl)-5-pteridinyl]phenyl]- (9CI) (CA INDEX NAME)

RN 847756-38-1 HCAPLUS
CN Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-

Young; Shawquia, Page 9

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-75-6 HCAPLUS
2-Pteridinamine, 6-[4-(2-methoxyethoxy)phenyl]-4-(4-morpholinyl)- (CA
INDEX NAME)

847756-76-7 HCAPLUS 2-Pteridinamine, 6-(4-butoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

RN CN INDEX 847756-82-5 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-thiomorpholinyl)- (CA NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN INDEX NAME)

847756-39-2 HCAPLUS
2-Pteridinamine, 6-(4-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-40-5 HCAPLUS 2-Pteridinamine, 6-(3-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-67-6 HCAPLUS
Phenol, 4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}- (CA INDEX NAME)

ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN. (Continued)
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MK, MZ, NA
NO, NZ, OM, MG, PM, PL, PT, RO, RU, SC, SD, 9E, SG, SK, SL
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM
RN: BW, GH, GM, KE, LS, MM, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZM
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO
SN, TD, TG
EP 1653244 A2 20050507 EP 2004-765120 2004
               PRIORITY APPLN. INFO.:
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                                                                                                                                                                                                           A 20040422
                                                                                                                                            WO 2004-EP10198
                                                                                                                                                                                                           W 20040913
OTHER SOURCE(S): MARPAT 142:297927

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-07-0P
278800-08-1P 278800-09-2P 278800-18-3P
RL: PAC (Pharmacological activity) SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pteridine derivs. for treating TNP-alpha related disorders)
RN 247913-58-2 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)
                                                                                     -methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX
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This invention relates to the use of a group of pteridine derivs. I (X = 0, or S(0)m wherein m is an integer from 0 to 2, or a substituted amine, R1 = alkyl, alkynyl, cycloalkyl, aryl heterocycle, halogen, alkoxy etc.; R2 = amino, acylamino, thioacylamino, carbamoyl, thiocarbamoyl, ureido, thioredio, sulfon-amido, hydroxylamino, alkoxyamino, thioalkylamino, mercaptoamino, hydrazino, alkylhydrazino, aryl, heterocycle, etc.; R3, R4 - H, halogen, alkyl, alkenyl, alkynyl, alkyl, carboxy, acetoxy, alkoxy, oxyheterocyclic, etc.) their pharmaceutically acceptable salts, N-oxides, solvates, dihydro- and tetrahydro derivs, and enantiomers, for the facture solvates, dihydro- and tetranyulo usilvs. And temperature of a medicament for the prevention or treatment of TNF-a related disorders. Thus, 2-amin-a-1sopropoxypteridine was cooled in trifluoroacetic acid and treated with 35% H2O2 to give 2-amino-4-isopropoxypteridine-NN-oxide which had a IC50 value of 4.0 µM against TNF-a. The conditions treated may be septic or endotoxic shock, toxic effects of radiotherapy, TNF-a or chemotherapeutic agents, or cachexia.

ACCESSION NUMBER: 2005:228920 HCAPLUS
DOCUMENT NUMBER: 121:297927
TITLE: Periodine derivatives for treating TNF-alpha related disorders disorders
Herdewijn, Piet, Waer, Mark, De Jonghe, Steven Cesar
Alfons, Yuan, Lin, El Hassane, Sefrioui
4 A2A Bioscience NV, Belg.
Brit. UK Pat. Appl., 72 pp.
CODEN: BAXXDU INVENTOR (S): PATENT ASSIGNEE(S): SOURCE: Patent English DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: PATENT NO. KIND DATE APPLICATION NO. DATE 20050316 20050324 GB 2003-21384 AU 2004-271721 CA 2004-2534549 WO 2004-EP10198 GB 2405793 AU 2004271721 CA 2534549 WO 2005025574 20050324 20050324 20050630 WO 2005025574 AE, AG, AL, AM, AT, AU, AZ, CN, CO, CR, CU, CZ, DB, DK, GB, GH, GM, HR, HU, ID, IL, BG, BR, BW, EC, EE, EG, JP, KE, KG, ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) 247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME) 247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 16 Mar 2005

278800-07-0 HCAPLUS
2-Pteridinamine, 6-(3,4-dimathoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

HCAPLUS

2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

Young, Shawquia, Page 10

278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

2-Pteridinamine, 6-(3.4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 11 Mar 2005

This invention relates to a group of trisubstituted and tetrasubstituted pteridine derivs. I $\{X=0,'S(0)m,NZ,m=.0\cdot2,Z=H,OH,Ri\ or\ NZ=heterocyclic group,Rl= (un)substituted C1-7 alkyl, C2-7 alkynyl, C3-10 cycloalkyl, C3-10 cycloalkenyl, aryl, alkylaryl,$

natkynyl, C3-10 cycloalkyl, C3-10 cycloalkenyl, aryl, alkylaryl, arylalkyl, heterocyclyl, heterocycloalkyl, etc., R2 = amino, acylamino, thioacylamino, carbamoyl, thioacrbamoyl, ureido, thioureido, sulfonamido, hydroxylamino, alkoxyamino, thioalkylamino, hydrazino, etc., R3 = F, Cl, Br, iodo, any group R1, R4 = H, halo, any group R1), their pharmaceutically acceptable salts, N-oxides, solvates, dihydro and tetrahydro derivs. and enantiomers, possessing unexpectedly desirable pharmaceutical properties, in particular which are highly active immunosuppressive agents, and as such are useful in the treatment in transplant rejection and/or in the treatment of certain inflammatory diseases. These compds. are also useful in preventing or treating cardiovascular disorders, allergic conditions, disorders of the central nervous system and cell proliferative disorders. Thus, (S)-sec-butylpteridine II (prepared in several steps from (S)-sec-butylamine) showed an IC50 of 0.2 µmol/L in a mixed lymphocyte suppression assay.

ACCESSION NUMBER: 2005;216684 HCAPLUS
DOCUMENT NUMBER: 142:298130

TITLE: Preparation and immunosuppressive effects of pteridine

pteridine

derivatives
Waer, Mark Jozef Albert; Herdewijn, Piet Andre INVENTOR (S):

Maria; Pfleiderer, Wolfgang Eugén; Marchand, Arnaud Didier Marie; De Jonghe, Steven Cesar Alfons 4 Aza Bloscience NV, Belg. PCT Int. Appl., 100 pp. CODEN: PIXXD2

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

APPLICATION NO. PATENT NO. DATE

Young, Shawquia, Page 11

ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

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CN, CO,
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TJ, TM,
RWI: BM, GH,
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US 2004077859
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A2 20350310 W0 2004-BE124
A1 20356699
AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, CR, CU, CZ, DC, DK, DM, DZ, EC, ER, EG, GM, HR, HU, ID, IL, IN, IS, JF, KE, KG, LS, LT, LU, LV, MA, MD, MG, MK, MN, MM, MM, CM, PG, PH, PL, PT, RO, RU, SC, SD, SE, TR, TR, TT, TZ, UA, UG, US, UZ, VC, VN, GM, KE, LS, MK, MZ, NA, SD, SL, SZ, TZ, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, TF, FR, GB, GR, HU, IE, IT, LU, MC, NL, TR, BF, BJ, CP, CG, CI, CM, GA, GN, QG, TG
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CR 2534151 A1 20050310
EP 1658081 A2 20060524
R: AT, BE, CH, DE, DK, ES, FR,
IE, 8I, FI, RO, CY, TR, BG,
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WO 2004-BE124 W 200408

OTHER SOURCE(S): CASREACT 142:298130, MARPAT 142:298130

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847756-41-6P 847756-62-2P 278800-18-3P
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847756-50-7P 847756-54-1P 847756-52-9P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W 20040827
                                              (proparation and immunosuppressive effects of pteridine derivs.) 247913-58-2 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)
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ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

247913-60-6 HCAPLUS
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI). (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

278800-09-2 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAMB)

General HCAPLUS
Benzamide, N. [4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- [CA
INDEX NAME]

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ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

278800-06-9 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278800-07-0 RCAPLUS 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME) .

278800-08-1 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-42-7 HCAPLUS

Acetamide, -[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-phenoxy-(CA INDEX NAME)

847756-43-8 HCAPLUS Propanamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]- (CA INDEX NAME)

847756-44-9 HCAPLUS 2-Furancarboxamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

847756-45-0 HCAPLUS
Cyclohexanecarboxamide, N-[4-[2-amino-4-(4-morpholinyl)-6pteridinyl]phenyl]- (CA INDEX NAME)

LB ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 847756-46-1 HCAPLUS
CN Benzamide, N-{4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl}-4-chloro-(CA INDEX NAME)

RN 847756-47-2 HCAPLUS
CN Acetamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl]-2(phenylmethoxy)- (CA INDEX NAME)

RN 847756-48-3 HCAPLUS
CN 4-Pyridinecarboxamide, N-[4-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]- (CA INDEX NAME)

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-52-9 HCAPLUS
CN Benzoic acid, 4-[[[4-{2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]carbonyl]-, methyl ester (CA INDEX NAME)

RN 847756-53-0 HCAPLUS
CN Benzamide, N-[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]pheny1]- (CA INDEX NAME)

RN 847756-54-1 HCAPLUS
CN Benzenesulfonamide, N-[3-{2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl}(CA INDEX NAME)

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 847756-49-4 HCAPLUS
CN 2-Naphthalenecarboxamide, N-(4-(2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl)- (CA INDEX NAME)

RN 847756-50-7 HCAPLUS
CN Methenesulfonamide, N-(4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl](CA INDEX NAME)

RN 847756-51-8 HCAPLUS
CN Butanoic acid,
4-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued

RN 847756-55-2 HCAPLUS
CN Acetamide,
N-[3-{2-amino-4-{4-morpholinyl}-6-pteridinyl]phenyl}-2-phenoxy(CA INDEX NAME)

RN 847756-56-3 HCAPLUS
CN 4-Pyridinecarboxamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA INDEX NAME)

RN 847756-57-4 HCAPLUS CN Cyclohexamecarboxamide, N-[3-[2-amino-4-(4-morpholiny1)-6pteridiny1]phenyll- (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-58-5 HCAPLUS
Benzoic acid, 4-[{[3-[2-amino-4-(4-morpholinyl)-6pteridinyl)phenyl)amino|carbonyl}-, methyl ester (CA INDEX NAME)

RN 847756-59-6 HCAPLUS
CN Butanoic.acid,
4-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]4-oxo-, ethyl ester (CA INDEX NAME)

847756-60-9 HCAPLUS
Propanoic acid, 3-[[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]amino]-3-oxo-, ethyl ester (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-64-3 HCAPLUS
Carbamic acid, {(1R)-2-{[3-[2-amino-4-(4-morpholiny1)-6-pteridiny1]phenyl]amino}-2-0xo-1-(phenylmethyl)ethyl]-, 1,1-dimethylethyl
ester (9C1) (CA INDEX NAME)

Absolute stereochemistry.

847756-65-4 HCAPLUS

Carbamic acid, [(18)-2-[[3-(2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Young, Shawquia, Page 14

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

B47756-61-0 HCAPLUS Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-2-(phenylmethoxy)- (CA INDEX NAME)

847756-62-1 HCAPLUS Bthanesulfonamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]-(CA INDEX NAME)

847756-63-2 HCAPLUS
Carbamic acid, [(18)-2-[[3-(2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]amino]-2-oxo-1-(phenylmethyl)ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

847756-66-5 HCAPLUS
Carbamic acid, [(1R)-2-[[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyllamino]-1-(1H-indol-3-ylmethyl)-2-oxoethyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

847756-68-7 HCAPLUS 2-Pteridinamine, 6-(4-ethoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-69-8 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-[4-(phenylmethoxy)phenyl]- (CA

847756-70-1 HCAPLUS 2-Pteridinamine, 4-(4-morpholinyl)-6-(4-(2-phenylethoxy)phenyl)- (CA INDEX NAME) (CA

L8 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-71-2 HCAPLUS
Butanenitrile, 4-{4-{2-amino-4-(4-morpholinyl)-6-pteridinyl}phenoxy}-

INDEX NAME)

847756-72-3 HCAPLUS 2-Pteridinamine, 4-(4-morpholinyl)-6-(4-propoxyphenyl)- (CA INDEX NAME)

847756-73-4 HCAPLUS
Butancic acid, 4-(4-(2-amino-4-(4-morpholiny1)-6-pteridiny1)phenoxy)-,
ethyl ester (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

RN 847756-82-5 HCAPLUS
CN 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-thiomorpholinyl)- (CA INDEX

847756-37-0P 847756-38-1P 847756-39-2P 847756-40-5P 847756-60-6P RL: RCT (Reactant), SPN (Synthetic preparation), PREP (Preparation), RACT (Reactant or reagent) (preparation and immunosuppressive effects of pteridine deriva.) 847756-37-0 HCAPLUS Acctamide, N-[4-[2-amino-4-(4-morpholinyl)-6-pteridinyl)phenyl]- (CA INDEX NAME)

847756-38-1 HCAPLUS
Acetamide, N-[3-[2-amino-4-(4-morpholinyl)-6-pteridinyl]phenyl]- (CA
INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

847756-74-5 HCAPLUS
Acetic acid, [4-[2-amino-4-[4-morpholinyl]-6-pteridinyl]phenoxy]-, ethyl
eater [9C1] (CA INDEX NAME)

847756-75-6 HCAPLUS 2-Pteridinamine, 6-[4-(2-methoxyethoxy)phenyl]-4-(4-morpholinyl)- (CA INDEX NAME)

847756-76-7 HCAPLUS
2-Pteridinamine, 6-(4-butoxyphenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

847756-39-2 HCAPLUS 2-Pteridinamine, 6-(4-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-40-5 HCAPLUS
2-Pteridinamine, 6-(3-aminophenyl)-4-(4-morpholinyl)- (CA INDEX NAME)

847756-67-6 HCAPLUS
Phenol, 4-[2-amino-4-(4-morpholinyl)-6-pteridinyl]- (CA INDEX NAME)

EA ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN

ED Entered 9TN: 23 Apr 2004

AB This invention relates to a group of trisubstituted and tetrasubstituted pteridine derivs, their pharmaceutically acceptable salts, N-oxides, solvates, dihydro- and tetrahydroderivatives and enantiomers, possessing unexpectedly desirable pharmaceutical properties, in particular which are highly active immunosuppressive agents, and as such are useful in the treatment in transplant rejection and/or in the treatment of certain inflammatory diseases. These compds, are also useful in preventing or treating cardiovascular disorders, allergic conditions, disorders of the central nervous system and cell proliferative disorders. The pteridine deriva. (preparation given) inhibited the mixed lymphocyte reaction and reduced

T cell proliferation in the CD3 and CD28 assay.

ACCESSION NUMBER: 2004;331825 HCAPLUS

DOCUMENT NUMBER: 140:350561

Immunosuppressive effects of pteridine derivatives and

TITLE:

INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

Maria, Pfleiderer, Wolfgang Eugen
Beig.
U.S. Pat. Appl. Publ., 46 pp., Cont.-in-part of U.S.
Ser. No. 869,468, abandoned.
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	W:	AE, CN, GE,	AG, CO, GH,	AL, CR, GM,	AM, CU, HR,	AT, CZ, HU,	AU, DE, ID,	AZ, DK, IL,	BA, DM, IN,	DZ, IS,	EC, JP,	EE, KE,	EG, KG,	ES, KP,	FI, KR,	GB, KZ,	GD, LC,
	W:	AE, CN, GE, LK,	AG, CO, GH, LR,	AL, CR, GM, LS,	AM, CU, HR, LT,	AT, CZ, HU, LU,	AU, DE, ID, LV,	AZ, DK, IL, MA,	BA, DM, IN, MD,	DZ, IS, MG,	EC, JP, MK,	EB, KB, MN,	EG, KG, MW,	ES, KP, MX,	FI, KR, MZ,	GB, K2, NA,	GD, LC, NI,
	W:	AE, CN, GE, LK, NO,	AG, CO, GH, LR, NZ,	AL, CR, GM, LS, OM,	AM, CU, HR, LT, PG,	AT, CZ, HU, LU, PH,	AU, DE, ID, LV, PL,	AZ, DK, IL, MA, PT,	BA, DM, IN, MD, RO,	DZ, IS, MG, RU,	EC, JP, MK, SC,	EE, KE, MN, SD,	EG, KG, MW, SE,	ES, KP, MX, SG,	FI, KR, MZ, SK,	GB, KZ, NA, SL,	GD, LC, NI, SY,
		AE, CN, GE, LK, NO, TJ,	AG, CO, GH, LR, NZ, TM,	AL, CR, GM, LS, OM, TN,	AM, CU, HR, LT, PG, TR,	AT, CZ, HU, LU, PH, TT,	AU, DE, ID, LV, PL, TZ,	AZ, DK, IL, MA, PT, UA,	BA, DM, IN, MD, RO, UG,	DZ, IS, MG, RU, US,	EC, JP, MK, SC, UZ,	EE, KE, MN, SD, VC,	EG, KG, MW, SE, VN,	ES, KP, MX, SG, YU,	FI, KR, MZ, SK, ZA,	GB, KZ, NA, SL, ZM,	GD, LC, NI, SY, ZW
		AE, CN, GE, LK, NO, TJ, BW,	AG, CO, GH, LR, NZ, TM, GH,	AL, CR, GM, LS, OM, TN, GM,	AM, CU, HR, LT, PG, TR, KE,	AT, CZ, HU, LU, PH, TT, LS,	AU, DE, ID, LV, PL, TZ, MW,	AZ, DK, IL, MA, PT, UA, MZ,	BA, DM, IN, MD, RO, UG, NA,	DZ, IS, MG, RU, US, SD,	EC, JP, MK, SC, UZ, SL,	EE, KE, MN, SD, VC, SZ,	EG, KG, MW, SE, VN, TZ,	ES, KP, MX, SG, YU, UG,	FI, KR, MZ, SK, ZA, ZM,	GB, KZ, NA, SL, ZM, ZW,	GD, LC, NI, SY, ZW AM,
		AE, CN, GE, LK, NO, TJ, BW, AZ,	AG. CO, GH, LR, NZ, TM, GH, BY,	AL. CR. GM. LS. OM. TN. GM. KG.	AM, CU, HR, LT, PG, TR, KE,	AT, CZ, HU, LU, PH, TT, LS, MD,	AU, DE, ID, LV, PL, TZ, MW, RU,	AZ, DK, IL, MA, PT, UA,	BA, DM, IN, MD, RO, UG, NA, TM,	DZ, IS, MG, RU, US, SD, AT,	EC, JP, MK, SC, UZ, SL, BE,	EB, KE, MN, SD, VC, SZ, BG,	EG, KG, MW, SE, VN, TZ, CH,	ES, KP, MX, SG, YU, UG, CY,	FI, KR, MZ, SK, ZA, ZM, CZ,	GB, KZ, NA, SL, ZM, ZW, DB,	GD, LC, NI, SY, ZW AM, DK,

ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

7913-60-6 HCAPLUS
Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI)

B800-06-9 HCAPLUS
Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX

Young, Shawquia, Page 16

ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN (Continued)
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GG, GM, ML, WR, NE.
SN, TD, TS
EP 1655081 A2 20060524 EP 2004-761485 20040827
R: AT, BE, CH, DE, DK, BS, PR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, C2, EE, HU, PL, SK
US 2006189520 A1 20060824 US 2006-595126 20060118
US 2006287314 A1 20061221 US 2006-595126 20060127
DITTY ADDIN IMPO 19981228 PRIORITY APPLN. INFO.: US 1998-113989P WO 1999-EP10320 W 19991228 US 2001-869468 B2 20011010 US 2003-651604 A 20030829 GB 2004-8955 A 20040422 WO 2004-BE124 W 20040827

CTHER SOURCE(s): MARPAT 140:350561

IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-05-3P 278800-07-0P
278800-08-1P 278800-09-3P 278800-18-3P

RL: BSU (Biological study, unclassified), PAC (Pharmacological activity),
SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PREP (Preparation), USES (Uses)
(immunosuppressant peridine derive. and compns.)

RN 247913-58-2 RAPADLS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

ANSWER 5 OF 14 HCAP 278800-07-0 HCAPLUS HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9C1) (CA

278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-09-2 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA
INDEX NAME)

278800-18-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) 247913-60-6 247913-61-7 RE: PAC (Pharmacological activity), RCT (Reactant), THU (Therapoutic BIOL (Biological study), RACT (Reactant or reagent); USES (Uses) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal NOS inhibitors) 913-60-6 HCAPLUS 247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

RI: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal NOS

inhibitors)
278800-09-2 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA
INDEX NAME)

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 26 May 2002 The family of homodimeric nitric oxide synthases (NOS I-III) catalyzes

generation of the cellular messenger nitric oxide (NO) by oxidation of

substrate L-arginine. The rational design of specific NOS inhibitors is of therapeutic interest in regulating pathol. No levels associated with sepsis, inflammatory, and neurodegenerative diseases. The cofactor (6R)-5,6,7,8-tetrahydrobiopterin (H8Bip) maximally activates all NOSs and stabilizes enzyme quaternary structure by promoting and stabilizing dimerization. Here, we describe the synthesis and three-dimensional (3D) quant. structure-activity relationship (QSAR) anal. of 65 novel 4-amino-and 4-oxo-pteridimes (antipterins) as inhibitors targeting the H4Bip binding site of the neuronal NOS isoform (NOS-17). The exptl. binding modes for two inhibitors complexed with the related endothelial NO synthase (NOS-171) reveal requirements of biol. affinity and form the basis for ligand alignment. Different alignment rules were derived by building other compds. accordingly using manual superposition or a tic

genetic

algorithm for flexible superposition. Those alignments led to JD-QSAR models (comparative mol. field anal. (COMPA) and comparative mol. similarity index anal. (COMSIA), which were validated using leave-one-out cross-validation, multiple analyses with two and five randomly chosen cross-validation groups, perturbation of biol. activities by randomization or progressive scrambling, and external prediction. An iterative realignment procedure based on rigid field fit was used to improve the consistency of the resulting partial least squares models. This led to consistent and highly predictive JD-QSAR models with good correlation coeffs. for both COMFA and COMSIA. Which correspond to exptl. determined NOS-II

NOS-II

and -III H4Bip binding site topologies as well as to the NOS-I homol
model binding site in terms of steric, electrostatic, and hydrophobic
complementarity. These models provide clear guidelines and accurate
activity predictions for novel NOS-I inhibitors.

ACCESSION NUMBER: 2002/392358 HCAPLUS
DOCUMENT NUMBER: 137:119960
ITITLE: Structural Requirements for Inhibition of the
Neuronal

Nitric Oxide Symphage (NOS-I): 3D-OSAR Analysis

Nitric Oxide Synthase (NOS-I): 3D-QSAR Analysis of 4-Oxo- and 4-Amino-Pteridine-Based Inhibitors Matter, Hans; Kotsonis, Peter; Klingler, Otmar; Strobel, Hartmut, Proehlich, Lothar G., Frey, Armin, Pfleiderer, Wolfgang, Schmidt, Harald H. H. W. Molecular Modeling, Aventis Pharma; Frankfurt am AUTHOR (S):

CORPORATE SOURCE:

65926, Germany Journal of Medicinal Chemistry (2002), 45(14), SOURCE: Journal of Medicinal Chemistry 2923-2941 CODEN: JMCMAR; ISSN: 0022-2623 American Chemical Society

PUBLISHER:

DOCUMENT TYPE: LANGUAGE: OTHER SOURCE(S):

Journal English CASREACT 137:119060

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-58-2 247913-59-3 RL: PAC (Pharmacological activity), THU (Therapeutic use), BIOL (Biological study), USES (Uses) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal

inhibitors)
247913-58-2 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-59-3 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278809-08-1 RL: RCT (Reactant) / RACT (Reactant or reagent) (preparation and QSAR of 4-oxo- and 4-amino-pteridine-based neuronal IT

inhibitors)
278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

REFERENCE COUNT:

111 THERE ARE 111 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

WO 2000-R08833 W 20000911

OTHER SOURCE(S): MARPAT 134:237499

IT 247913-58-2P 247913-60-6P 247913-61-7P
278800-07-0P 278800-08-1P 330575-33-2P
RL: BAC (Biological activity or effector, except adverse), BSU

(Biological study, unclassified), RCT (Reactant), SPN (Synthetic preparation), THU
(Therapeutic use), BIOL (Biological study), PREP (Preparation), RACT
(Reactant or reagent), USES (Uses)
(Inhibitors for pharmaceutical use)

RN 247913-58-2 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)

247913-60-6 HCAPLUS
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 30 Mar 2001

Pteridines, such as I [R1, R2 = H, alkyl, aryl, arylalkyl, R1R2 = nitrogen

ogen
bound heterocyclyl, such as 1-piperidinyl or 4-morpholinyl, R4 = alkyl,
alkenyl, alkynyl, cycloalkenyl, aryl, etc., R3, R5 = acyl, aroyl, R6 = R7
= H, or R3R6 = R5R7 = bond;], were prepared for pharmaceutical use.

pteridine II was prepared via cyclocondensation of N4,N4-dimethylpyrimidineterramine dihydrochloride and phenylglyoxal monoxime. The prepared pteridines were tested for nitric oxide synthase inhibiting activity.

ACCESSION NUMBER: DOCUMENT NUMBER

2001:228889 HCAPLUS 134:237499

TITLE: INVENTOR (S): 134:237499
Preparation of N-substituted-4-aminopteridines as NO
synthase inhibitors for use as pharmaceuticals
Pfleiderer, Wolfgang, Schmidt, Harald, Proehlich,
Lothar, Kotsonis, Peter, Taghavi-Moghadam, Shahriyar
Vasopharm Biotech G.m.b.H. & Co. K.-G., Germany
PCT Int. Appl., 43 pp.
CODEN: PIXXD2

PATENT ASSIGNEE(S):

DOCUMENT TYPE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

> PATENT NO. . DATE KIND DATE APPLICATION NO. MO 2001021619 A1 20010329 MO 2000-EP8833 20000911
> M: AE, AG, AL, AM, AT, AV, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, NM, MK, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
> RHI GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SB, BP, BJ, CP, CG, CI, CM, GA, GN, GM, ML, MR, NE, SN, TD, TU
> DE 19944767 A1 20010329 DE 1999-19944767 19990917

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

278800-07-0 HCAPLUS 2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

278800-08-1 HCAPLUS
2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

RN 330575-33-2 HCAPLUS
CN 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)-,
monohydrochloride
(9C1) (CA INDEX NAME)

• HCl

IT 330575-32-1P 330575-34-3P
RL: BAC (Biological activity or effector, except adverse), BSU
(Biological
Study, unclassified), SPN (Synthetic preparation), THU (Therapeutic use),
BIOL (Biological study), PREP (Preparation), USES (Uses)
(preparation of N-substituted-4-aminopteridines as NO synthase inhibitors
for pharmaceutical use)
RN 330575-32-1 HCAPLUS
CN 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)-, monohydrochloride
(9CI) (CA INDEX NAME)

330575-34-3 HCAPLUS
2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)-, monohydrochloride (9C1) (CA INDEX NAME)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS ON STN Entered STN: 07 Jul 2000

Pteridines, such as I (R1, R2 = NH2, NHOH, alkylamine, dislkylamine, alkyloxyamine, dialkyloxyamine, nitrogen containing heterocyclyl, etc.,

halogen, alkoxy, alkyl, aryl, etc., R4 = H, alkyl, alkoxy, aryl] were prepared for pharmaceutical use in the treatment of inflammatory diseases and autoimmune disorders. Thus, pteridine II was prepared in 72% yield

reaction of 6-chloro-4-(pentyloxy)-2-pteridinamine and styrene using palladium acetate, tri-o-tolylphosphine, cuprous iodide, and

Triethylamann
in acetonicrile. The preparation of acetonicrile.

inmunosuppressive
and anti-inflammatory activity.
ACCESSION NUMBER:
DOCUMENT NUMBER:
133:73895
TITLE:
Preparation of pteridine derivatives for pharmaceutical use in the treatment of inflammatory diseases and autoimmune disorders

INVENTOR(S):
Waer, Mark Joseph Albert, Herdewijn, Piet Andre Maurits Maria; Pfleiderer, Wolfgang Bugen
PATENT ASSIGNER(S):
SOURCE:
CODE: PIXXD2
Patent
PATENT ASSIGNER(S):
PATENT ASSIGNER(S): triethylamine in acctonitrile. The prepared pteridines were tested for

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

 			••••															
PAT	ENT	NO.					DATE											
									•						-			
WO	2000	0391	29		Al		2000	0706	1	40 1	999-	EP10	320		1	9991:	228	
		AE,																
		CZ.	DE.	DK.	DM.	EE.	ES.	PI,	GB.	GD,	GB,	GH,	GM,	HR,	HU,	ID,	IL,	
								KR,										
								NO,										
								TZ,										
	RW:	GH,															DE,	
								IE,										
								ML,										
CA	2356	380			A1		2000	0706		CA 1	999-	2356	380		1	9991	228	
EP	1144	412			A1		2001	1017		EP 1	999-	9646	63		1	9991	228	
BP	1144	412			B1		2004	0929										
•	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,	

Young, Shawquia, Page 19

ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

• HC1

REFERENCE COUNT:

THERE ARE 8 CITED REPERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L8 ANSMER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued) IR, 91, LT, LV, P1, R0 JP 2002533464 T 20021008 JP 2000-591040 19991228 AU 770551 B2 20040226 AU 2000-30429 19991228 AT 277929 T 20041015 AT 1999-964663 19991228 ES 2229803 T3 20050416 ES 1999-964663 19991228 US 2004077859 A1 20040422 US 2003-651604 20030829 US 2004107859 A1 20040422 US 2003-651604 20030829 US 2004107859 A1 20040422 US 2003-651604 20030829
JP 2002533464 T 20021008 JP 2000-591040 19991228 AU 770551 B2 20040226 AU 2000-30429 19991228 AT 277929 T 20041015 AT 1999-964663 19991228 ES 2229803 T3 20050416 ES 1999-964663 19991228 US 2004077859 A1 20040422 US 2003-651604 20030829
AU 770551 B2 20040226 AU 2000-30429 19991228 AT 277929 T 20041015 AT 1999-964663 19991228 ES 2229803 T3 20050416 ES 1999-964663 19991228 US 2004077859 A1 20040422 US 2003-651604 20030829
AT 277929 T 20041015 AT 1999-964663 19991228 ES 2229603 T3 20050416 ES 1999-964663 19991228 US 2004077859 A1 20040422 US 2003-651604 20030829
ES 2229803 T3 20050416 ES 1999-964663 19991228 US 2004077859 A1 20040422 US 2003-651604 20030829
US 2004077859 A1 20040422 US 2003-651604 20030829
03 2004077633
US 2006287314 A1 20061221 US 2006-595126 20060227
PRIORITY APPLN. INFO.: US 1998-113989P P 19981228
PRIORIE AFFEN. INCO.:
WO 1999-BP10320 W 19991228
US 2001-869468 B2 20011010
. US 2003-651604 A1 20030829
GB 2004-8955 A 20040422
WO 2004-BE124 W 20040827
OTHER SOURCE(S): MARPAT 133:73895
IT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P 278800-06-9P 278800-07-0P
278800-08-1P 278800-09-2P 278800-18-3P
RL: BAC (Biological activity or effector, except adverse); BSU
(Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use)
BIOL (Biological study), PREP (Preparation), USES (Uses)
(preparation of pteridine derivs, for pharmaceutical use in the
treatment of
inflammatory diseases and autoimmune disorders)
RN 247913-58-2 HCAPLUS
CN 2-Pteridinamine, 4-(4-morpholinyl)-6-phenyl- (9CI) (CA INDEX NAME)
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247913-59-3 HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

247913-60-6 HCAPLUS ,
2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAMB)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

278800-06-9 HCAPLUS 2-Pteridinamine, 6-(4-chlorophenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAMB)

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN (Continued)

278800-18-3 HCAPLUS
2-Pteridinamine, 4-(4-morpholinyl)-6-(3,4,5-trimethoxyphenyl)- (9CI) (CAINDEX NAME)

THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

HCAPLUS

2-Pteridinamine, 6-(4-chlorophenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX

HCAPLUS

2-Pteridinamine, 6-(3,4-dimethoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

Entered STN: 21 Sep 1999

The family of nitric oxide synthases (NOS) catalyzes the conversion of L-arginine to L-citrulline and nitric oxide (NO), an important cellular measenger mol, which has been implicated in the pathophysiol, of septic shock and inflammatory and neurodegenerative disease states. NOS can be maximally activated by the ubliquitous cofactor, (6R)-5,6,7,6-tetrahydrobiopterin (HMBip), and antagonists of HMBip may be of therapeutic importance to inhibit pathol. high NO formation. The 4-amino substituted analog of HMBip was reported to be a potent NOS inhibitor. Therefore, we developed a series of novel 4-amino pteridine derive., anti-pterins, to pharmacol. target the neuronal isoform of nitric oxide synthase (NOS-I). To functionally characterize the pterin/anti-pterin interaction and establish a structure-activity relationship (SAR), we systematically altered the substituents in the 2-, 4-, 5-, 6-, and 7-position of the pteridine nucleus. Varying the substitution pattern in the 2-, 5-, and 7-position resulted in no significant inhibitory effect

enzyme activity. In contrast, bulky substituents in the 6-position, such as Ph, markedly increased the inhibitory potency of the reduced 4-amino-5,6,7,8-tetrahydropteridines, possibly as a consequence of hydrophobic interactions within NOS-I. However, this was not the case for the aromatic 4-amino pteridines. Interestingly, chemical modification of

4-amino substituent by dialkyl/diaralkylation together with 6-arylation

4-amino substituent by disky//diarakylation together with 6-arylation of the aromatic 2,4-diamino pteridine resulted in potent and efficacious inhibitors of NOS-I, suggesting possible hydrophilic and hydrophobic interactions within NOS-I. This SAR agrees with (a) the recently published crystal structure of the oxygenase domain of the inducible NOS isoform (NOS-II) and (b) the comparative mol. field anal. of selected NOS-I inhibitors, which resulted in a JD-QSAR model of the pterin binding site interactions. Further optimization should be possible when the full length structure of NOS-I becomes available.

ACCESSION NUMBER: 1999:589097 HCAPFUS

DOCUMENT NUMBER: 1199:589097 HCAPFUS

TITLE: 131:317316

Inhibition of Neuronal Nitric Oxide Synthase by 4-Amino Pteridine Derivatives: Structure-Activity Relationship of Antagonists of (6R)-5,67,8-Tetrahydrobiopterin Cofactor

AUTHOR(S): Prochich, Lothar G., Kotsonis, Peter; Traub,

AUTHOR(S): Hermann;

Hermann,

Taghavi-Moghadam, Shahriyar, Al-Masoudi, Najim,
Hofmann, Heinrich, Strobel, Hartmut, Matter, Hans,
Pfleiderer, Wolfgang, Schmidt, Harald H. H. W.
Department of Pharmacology and Toxicology,
Julius-Maximilians University Muerzburg, Weerzburg,
97078, Germany
Journal of Medicinal Chemistry (1999), 42(20),
4106-4121
CODEN: JMCMUR, ISSN: 0022-2623
American Chemical Society
DOCUMENT TYPE:
LANGUAGE: Journal
LANGUAGE: Rogilish
TT 247913-58-2P 247913-59-3P 247913-60-6P
247913-61-7P
RL: BAC (Biological activity or effector, except adverse), BSU
(Biological)
Study, unclassified), PRP (Properties), SPN (Symthatic)

ogical study, unclassified), PRP (Properties), SPN (Synthetic preparation), THU (Therapeutic use), BIOL (Biological study), PREP (Preparation), USES

ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2007 ACS On STN (Uses) (synthesis of and inhibition of neuronal nitric oxide synthase by

aminopteridines)
aminopterides)

HCAPLUS 2-Pteridinamine, 6-(4-methoxyphenyl)-4-(4-morpholinyl)- (9CI) (CA INDEX NAME)

247913-60-6 HCAPLUS 2-Pteridinamine, 6-phenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

247913-61-7 HCAPLUS
2-Pteridinamine, 6-(4-methoxyphenyl)-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 12 May 1984

$$\mathbb{R}^{1}$$

AB Diarylpteridines (I, R = H, OMe, OEt, R1 = MeS, NH2, R2 = OH) were obtained in 70-82.54 yields by condensation of the corresponding diaminopyrimidine with p-Rc6H4COCOC6H4-p 3 hr in bolling AcOH-BtOH. Chlorination of I (R = H, R1 = NH2, R2 = OH) with Pcls gave 71% I (R2 = Cl). Substitution reactions of the latter gave 45.6-70.5% I (R2 = Eto, MeSN, Rt2N, piperidino, NHNH2).

ACCESSION NUMBER: 1976:560035 HCAPLUS
DOCUMENT NUMBER: 65:160035
TITLE: 9teridine derivatives I. Synthesis of some substituted 6,7-diarylpteridines
AUTHOR(S): Kaldrikyan, M. A., Danagulyan, G. G., Khekoyan, A.

AUTHOR (S): V.;

Arsenyan, F. G., Aroyan, A. A.
Inst. Tonkoi Org. Khim. im. Mndzhoyana, Yerevan, USSR
Armyanskii Khimicheskii Zhurnal (1976), 29(4), 337-41
CODEN: AYKZAN, ISSN: 0515-9628

CORPORATE SOURCE: SOURCE:

DOCUMENT TYPE: Journal

LANGUAGE: Russian IT 60783-57-5P RL: SPN (Synthetic preparation), PREP (Preparation)

(preparation of)
60783-57-5 HOAPLUS
2-Pteridinamine, 6,7-diphenyl-4-(1-piperidinyl)- (9CI) (CA INDEX NAME)

ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

REFERENCE COUNT:

THERE ARE 60 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ENUMBER 11 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN

Entered STN: 12 May 1984

AB A number of 4,7-dlamino-6-phenyl-, 2,7-diamino-6-phenyl- and
2,4,7-triamino-6-arylpteridines were prepared for diuretic testing by
condensation of arylacetonitriles and 4-amino-5-nitrosopyrimidines.
2,4-Dlamino-6-(methylthio)-5-nitrosopyrimidine and 4,6-diamino-2(methylthio)-5-nitrosopyrimidine were treated with amines to give
replacement of the MeS group by an amino group. Uv and N.M.R. spectra
suggest that the 2-cyanomethyl- and 2-carboxamidomethyl-4,7-diamino-6phenylpteridines exist as tautomers in which the cyano and carboxamido
groups are conjugated with the pteridine ring. Certain other conclusions
were drawn from the spectral data. 20 references.

ACCESSION NUMBER:
1964:67335 HCAPLUS
DOCUMENT NUMBER:
1964:67335 HCAPLUS
59:67335
PTETITLE:
PTETIT

AUTHOR(S): Blaine;

Trost, Barry, Kirkpatrick, Joel, Parina, Frank, Straub, Alice S. Res. and Develop. Div., Smith Kline and Prench Lab., Philadelphia, PA, USA Journal of Medicinal Chemistry (1968), 11(J), 549-56 CODEN: JMCMAR, ISSN: 0022-2623 Journal English CORPORATE SOURCE:

SOURCE:

ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN
Entered STN: 12 May 1984
The diuretic activity of pteridines related to 2,4,7-triamino-6phenylpteridine (triamterene), 2,4-diamino-6,7-dimethylpteridine (1), and
4,7-diamino-2-phenyl-pteridine-6-carboxamide was studied in the
saline-loaded and sodium-deficient rat. A limited number of related
pyrimidopyrimidines were similarly studied. Some of the compds. related
to triamterene and I not only cause Na+ excretion but also conserve K+.
All the 2-phenylpteridines that were studied which are active natriuretic
agents also cause K+ excretion. In the triamterene series, replacement

any of the amino groups by either a large amine or a nonbasic group other than H leads to reduction of diuretic activity. Replacement of the Ph

small, nonbasic group gives active diuretic agents, but an aromatic (or heteroaromatic) group seems desirable for highest activity. Some variation in the substitution pattern on the pteridine ring is

permissible
as demonstrated by the activity of the triamterene isomers. The 7-Ph
isomer is outstanding as a blocker of K+ excretion.
ACCESSION NUMBER: 1968:452104 HCAPLUS
DOCUMENT NUMBER: 69:52104

DOCUMENT NUMBER: TITLE: Pteridines. XII. Structure-activity relation of

AUTHOR (S):

pteridine diuretics
Weinstock, Joseph, Wilson, James W., Wiebelhaus,
Virgil D., Maass, Alfred R., Brennan, Francis T.,
Sosnowski, Genevieve
Res. and Develop. Div., Smith Kline and French Lab.,
Philadelphia, PA, USA
Journal of Medicinal Chemistry (1968), 11(3), 573-9
CODEN: JMCMAR, ISSN: 0022-2623
JOURNAL
English CORPORATE SOURCE:

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: JOURNAL
LANGUAGE: English

IT 19173-02-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(as diuretic)

RN 19173-02-5 HCAPLUS

CN Pteridine, 2,7-diamino-6-phenyl-4-piperidino- (8CI) (CA INDEX NAME)

L8 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN
INVENTOR(S): Pachter, Irwin J., Weinstock, Joseph
SOURCE: STURCE: STURCE
LANGUAGE: Patent
LANGUAGE: Patent
LANGUAGE: Unavailable
PAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: (Continued)

APPLICATION NO. DATE DATE US 3159628 PRIORITY APPLN, INFO,: US 1962-197909 US 19620528

1048-67-5P, Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide RL: PREP (Preparation)

(preparation of)
1048-67-5 HCAPUS
Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide (7CI, 8CI) (CA
INDEX NAME)

ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 22 Apr 2001 A process which circumvents the standard methods of preparing N-oxide derivs., which would lead to degradation of the pteridine nucleus of

compds., is described. The process is carried out by treating a pyridinium reagent [prepared in situ from an a-halo or benzenesulfonyl ketone and CSHSN or from an aldenyde, NaCN, PhSO2CI (I), and CSHSN) with an appropriately substituted 6-amino-5-nitrosopyrimidine in the presence of a basic condensing agent. Condensing agents which contain CN-can be used only in reactions using the latter type of pyridinium reagent in preparing 7-aminopteridine 5-oxides. Thus, a mixture of 7.4 g. a-cyanobenzyl benzenesulfonate (II) (prepared from BzH, NaCN, and I), 8 mix CSHSN, and 15 ml. Me2CO is refluxed 15 min., added to a solution 3

.3
g. 4,6-diamino-5-nitroso-2-phenylpyrimidine (III) in 250 ml. Me2CO followed by a solution of 2 g. NaCN in 20 ml. H2O, warmed 5 min. at 40° and kept 1 hr. at room temperature to give 4,7-diamino-2,6-diphenylperidine 5-coxide, m. 355°. A mixture of 21.5 g. III, 20 g. KoAc, 25.6 g. acetonylpyridinium chloride (IV), 100 ml. H2O, and 1 l.

KOAC, 25.6 g. acetonylpyridinium chloride (IV), 100 ml. H2O, and 1 l. SIOH

SIOH

is refluxed 1 hr. to give 4-amino-7-methyl-2-phenylpteridine 5-oxide, m. 287* (decomposition). Similarly prepared (pyridinium reagent, substituents on 5-nitrosopyrimidine, condensing agent, and product given) are: II and C5H5N, 4.6-diamino-2-methylthio, NaCN, 4.7-diamino-2-methylthio-6-phenylpteridine 5-oxide, m. 351* (decomposition), IV, 4.6-diamino, NACO, 4-amino-7-methylpteridine 5-oxide, m. 256-12* (decomposition), phenacylpyridinium bromide, 4.6-diamino-2-phenyl, KOAC, 4-amino-2,7-diphenylpteridine 5-oxide, m. 256-60*, propiophenone-a-pyridinium bromide, 2.6-diamino-4-methyl, NAOAC, 2-amino-4,6-diamino, NaChphenylpteridine 5-oxide, II and Utudine, 2-(a-thienyl)-4,6-diamino, NaCO3, 2-(a-thienyl)-4,7-diamino-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-amino, NaCN, 2-methyl-4-hydroxy-6-phenylpteridine 5-oxide, II and C5H5N, 2.7-diamino-4-methylthio-6-phenylpteridine 5-oxide; II and C5H5N, 2-methyl-4-hydroxy-6-phenylpteridine 5-oxide (V), m. 306-8* (decomposition). III, 0.5 g. of the pyridinium salt of BrCH2CONH2, and 0.5 g. KOAC in 50 ml. BCOH refluxed gives 4-amino-7-hydroxy-6-phenylpteridine 5-oxide, m. 251-22*.

Diacetylated 2,4,6-triamino-5-nitrosopyrimidine (10 g.) in 120 ml. Me2SO is diluted in rapid succession with 500 ml. Me2CO, with a solution of 16.5 g. 11. 16.6 ml. CSH5N, and 30 ml. heated Me2CO, and finally with 4.1 g. NeCN

9. II, 16.6 ml. CSHSN, and 30 ml. heated Me2CO, and finally with 4.1 g. NaCN in 40 ml. H2O to give the diacetylaminopteridine derivative, which is

hydrolyzed with MeONa in MeOH to give 2,4,7-triamino-6-phenylpteridine 5-oxide, m. 340° (decomposition). V refluxed in piperidine for 16 hrs. gives 2,7-diamino-4-piperidino-6-phenylpteridine 5-oxide, m. 250-2° (decomposition) (EtOH). These compds, have antifolic acid activity

(decomposition) (ECOH). These compus, have shirted and setting against various microorganisms. Certain members of the series also have diuretic or antihypertensive activity.

ACCESSION NUMBER: 1965:36875. HCAPLUS
DOCUMENT NUMBER: 62:36875
DOCUMENT NUMBER: 62:36875
TITLE: Pteridine 5-oxides

ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2007 ACS on STN Entered STN: 22 Apr 2001
4-Amino-5-nitrospoyrimidines condense with benzoylacetonitrile, phenacylpyridinium bromide, and acetonylpyridinium chloride in the presence of sodium cyanide to produce 7-amino-6-peridyl ketones (I). Reduction of the products with sodium borohydride yields the

Reduction of the products with sodium borohydride yields the corresponding carbinols. 7-substituted pteridine 5-oxides are produced when 4-amino-5-nitrosopyrimidines condense with the aforementioned pyridinium salts in the presence of potassium acctate. The use of a-cyanobenzylpyridinium salts in related reactions results in the formation of 7-amino-6-phenylpteridine 5-oxides.

ACCESSION NUMBER: 1963:73306 HCAPLUS

DOCUMENT NUMBER: 58:73306

ORIGINAL REFERENCE NO.: 58:12546d-f

Pteridines. III. Synthesis of some ketones,

carbinols, and N-oxides

AUTHOR (S) :

and N-oxides Pachter, Irwin J., Nemeth, Piroska E., Villani, Anthony J. Smith, Kline & French Labs., Philadelphia, PA Journal of Organic Chemistry (1963), 28, 1197-202 CODEN JOCEMH, ISSN: 0022-2361 CORPORATE SOURCE: SOURCE:

Journal Unavailable CASREACT 58:73306

DOCUMENT TYPE: LANGUAGE: OTHER SOURCE(S): IT 1048-67-5P.

R SOURCE(S): CASERACT 58:73306
1048-67-5P, Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide
RL: PREP (Preparation)
(preparation of)
1048-67-5 HCAPLUS
Pteridine, 2,7-diamino-6-phenyl-4-piperidino-, 5-oxide (7CI, 8CI) (CA
INDEX NAME)

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